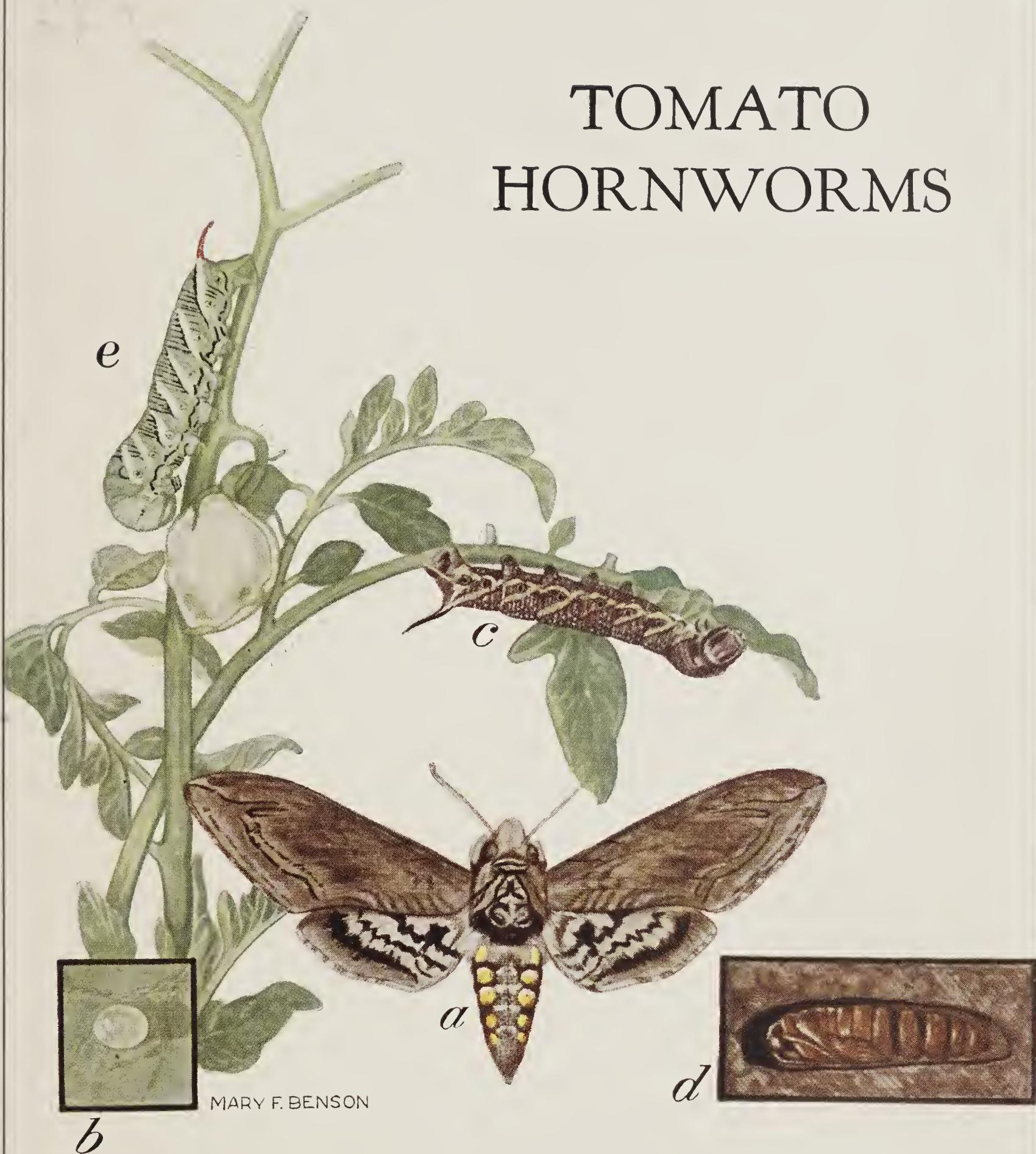


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TOMATO HORNWORMS



a, Moth (or adult) with wings spread; *b*, egg; *c*, larva, dark form; *d*, pupa (or resting stage); *e*, larva of the other species, light form. (*a* about three-fourths natural size; *b* about 4 times natural size; *c*, *d*, and *e* about one-half natural size.)

(See other side for life history and control)

TOMATO HORNWORMS

(*Protoparce* spp.)

Life History

The eggs of tomato hornworms are laid on the under side of the leaves. These eggs hatch in from 6 to 8 days. The resulting larvae feed on the leaves and sometimes on the fruits. The larva reaches full growth in 3 or 4 weeks, during which time it passes through five or six stages, or instars. The full-grown larva then burrows several inches into the ground and changes to a pupa, or resting stage. The pupa may remain in the soil all winter and transform to the moth stage in the spring, or, if weather conditions are suitable, the moth may emerge from the pupa after the expiration of from 2 to 4 weeks. In any event, the emerging moth makes its way to the soil surface and deposits eggs on tomato plants for the next brood of hornworms.

Control

Hand-pick the hornworms from infested plants in gardens or small fields.

There is no entirely satisfactory method for the control of tomato hornworms in large fields. Dusting the tomato plants with a mixture composed of equal parts of calcium arsenate and hydrated lime will prevent damage to some extent. The dust mixture should be applied directly to all parts of the plants. The treatments should begin early in the season and be repeated at weekly or 10-day intervals until the earliest formed fruits on the plants are about half grown.

Caution: Do not apply calcium arsenate, or any other insecticide that may leave a harmful residue, to tomato plants after the earliest formed fruits are approximately half grown, unless it is known definitely that washing or wiping will remove all harmful residues from the fruit before it is marketed or consumed.

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